

Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of All Pending Claims

1. (Currently Amended) ~~In a wireless communications device, a~~ A method for organizing ~~field-upgradeable a wireless communication device~~ system software, the method comprising:

forming the wireless communication device system software into a first plurality of code sections ~~symbol libraries, each symbol library comprising symbols having related functionality;~~

storing a plurality of code section start addresses ~~arranging the first plurality of symbol libraries into a second plurality of code sections; and~~

storing a code section address table cross-referencing a plurality of code section identifiers with a plurality of corresponding code section start addresses ~~executing the wireless device system software.~~

2. (Cancelled).

3. (Currently Amended) The method of claim 2 ~~1~~ further comprising wherein ~~arranging the first plurality of symbol libraries into a second plurality of code sections includes:~~

arranging a plurality of symbols to be offset from a one of the ~~their respective~~ code section start addresses; and

maintaining a symbol offset address table cross-referencing a plurality of symbol identifiers with a plurality of corresponding offset addresses, and a plurality of corresponding code section identifiers.

4. (Currently Amended) The method of claim 1 wherein forming the wireless communication device system software code into a first plurality of code sections ~~symbol libraries~~ includes forming read-write data for the plurality of code sections ~~symbol libraries~~; and

~~wherein arranging the first plurality of symbol libraries into a second plurality of code sections~~ includes arranging the read-write data in a shared read-write code section.

5. (Currently Amended) The method of claim 3 wherein forming the wireless communication device system software code into a first plurality of code sections ~~symbol libraries~~ includes forming a symbol accessor code and; arranging the symbol accessor code in a first code section; and

the method further comprising:

storing a the symbol accessor code address in a first location in memory;

~~wherein executing the code section as system software includes:~~

in response to referencing the first location in memory, accessing the symbol accessor code; and,

invoking the symbol accessor code to calculate the address of a sought symbol using a corresponding symbol identifier, and a corresponding code section identifier.

6. (Original) The method of claim 5 wherein invoking the symbol accessor code to calculate the address of the sought symbol includes accessing the code section address table and the symbol offset address table to calculate the address of the sought symbol.

7. (Original) The method of claim 5 wherein storing the symbol accessor code address in a first location in memory includes storing the symbol accessor code address in the first code section.

8. (Currently Amended) The method of claim 5 wherein ~~arranging the first plurality of symbol libraries into a second plurality of code sections~~ forming the wireless communication device system software includes arranging read-write data, the code section address table, the symbol offset address table, and the symbol accessor code in the first code section.

9. (Currently Amended) The method of claim 8 ~~wherein executing the wireless device system software includes~~ further comprising:

loading the read-write data, the code section address table, the symbol offset address table, the symbol accessor code, and the symbol accessor code address from the first code section into read-write volatile memory; and

accessing the read-write data, the code section address table, the symbol offset address table, the symbol accessor code, and the symbol accessor code address from read-write volatile memory.

10. (Currently Amended) The method of claim 2 1 wherein storing the start of code sections at corresponding start addresses includes:

creating a ~~second~~ plurality of contiguously addressed memory blocks;
identifying each memory block with a corresponding code section; and
storing code sections in the identified memory blocks.

11-32 (Cancelled).

33. (New) A wireless communication device comprising:

a memory storing:

a wireless communication device system software in a plurality of code sections;

a plurality of code section start addresses; and

a code section address table cross-referencing a plurality of code section identifiers with a plurality of corresponding code section start addresses; and

a processor connected to the memory and configured to execute the wireless communication device system software.

34. (New) The wireless communication device of claim 33, wherein:

the memory further stores a plurality of symbols offset from a one of the code section start addresses; and

a symbol offset address table cross-referencing a plurality of symbol identifiers with a plurality of corresponding offset addresses, and a plurality of corresponding code section identifiers.

35. (New) The wireless communication device of claim 33 wherein the memory further stores read-write data for the plurality of code sections in a shared read-write code section.

36. (New) The wireless communication device of claim 34 wherein the memory further stores:

a symbol accessor code address in a first location in memory; and

wherein the processor is further configured to:

in response to referencing the first location in memory, access the symbol accessor code; and

invoke the symbol accessor code to calculate the address of a sought symbol using a corresponding symbol identifier, and a corresponding code section identifier.

37. (New) The method of claim 36 wherein the processor is further configured to calculate the address of the sought symbol by accessing the code section address table and the symbol offset address table to calculate the address of the sought symbol.

38. (New) The method of claim 37 wherein the processor is further configured to:

load the read-write data, the code section address table, the symbol offset address table, the symbol accessor code, and the symbol accessor code address from the first code section into read-write volatile memory; and

access the read-write data, the code section address table, the symbol offset address table, the symbol accessor code, and the symbol accessor code address from read-write volatile memory.